Patent Claims

1. A method for controlling an imaging beam path, which is tapped off from a film recording beam path of a movie camera and is interrupted periodically as a function of the image recording frequency of the movie camera,

characterized

in that the imaging beam path (S2) is interrupted at a constant or variable frequency by means of an optical switching element (6, 7) during the exposure phase of the movie film (10), or is deflected from a first imaging plane to at least one second imaging plane, or to a light trap (13, 14).

2. The method as claimed in claim 1, **characterized** in that the duty ratio of the deflection of the imaging beam path (S2) onto the imaging planes or into the light traps (13, 14) is varied.

3. The method as claimed in claim 2, **characterized** in that the imaging beam path (S2) is deflected on a pulse-width-modulated basis onto the imaging planes or into the light traps (13, 14).

4. The method as claimed in at least one of the preceding claims, **characterized** in that the imaging beam path (S2) is deflected as a viewfinder beam path (S3) of the movie camera (1) onto an imaging plane, which can be viewed through an eyepiece (8), or into a first light trap (13).

5. The method as claimed in at least one of the preceding claims 1 to 3, **characterized** in that the imaging beam path (S2) is deflected as a video beam

path (S5) of the movie camera (1) to a video output mirror device (9)

with an optoelectronic transducer (92) for conversion of the video beam path (S5) to video signals (VS), or into a second light trap (14).

6. The method as claimed in at least one of the preceding claims 1 to 4, **characterized** in that the imaging beam path (S2) is deflected via a beam splitter (11) into a viewfinder beam path (S3) with an image plane which can be viewed through an eyepiece (8), and into a video beam path (S5) with an optoelectronic transducer (92) for conversion of the video beam path (S2) to video signals (VS) from the movie camera (1).

7. The method as claimed in at least one of the preceding claims, **characterized** in that the imaging beam path (S2) is interrupted in synchronism with the exposure phase of the movie film (10).

8. The method as claimed in at least one of the preceding claims, **characterized** in that the viewfinder beam path (S3) is deflected in synchronism with the exposure phase of the movie film (10) from the image plane which can be viewed through an eyepiece (8) to the first light trap (13).

9. The method as claimed in at least one of the preceding claims, **characterized** in that the video beam path (S5) is deflected in synchronism with the exposure phase of the movie film (10) from the video output mirror device (9) to the second light trap (14).

10. An apparatus for carrying out the method as claimed in at least one of the preceding claims, **characterized** by at least one DMD (Digital Micromirror Device) chip (6, 7) which is arranged in the imaging beam path (S2) of the movie camera (1) and has a large number of micromirrors which are arranged in the form

of a raster, can be pivoted under electronic control, and deflect the incident

beam path (S2) to a first or a second imaging plane, or into a light trap.

11. The apparatus as claimed in claim 10, **characterized** in that the micromirrors of a first DMD chip (6) reflect the imaging beam path (S2) to imaging optics in a viewfinder beam path (S3) or into a beam path (S4) of a first light trap (13).

12. The apparatus as claimed in claim 10, **characterized** in that the micromirrors of a second DMD chip (7) reflect the imaging beam path (S2) into a video beam path (S5) with an optoelectronic transducer (92) for compression of the video beam path (S5) to video signals (VS), or into a beam path (S6) of a second light trap (14).

13. The apparatus as claimed in claims 10 to 12, **characterized** in that the imaging beam path (S2) is split via a beam splitter (11) into a viewfinder beam path (S3) and a video beam path (S5), in that the micromirrors of the first DMD chip (6), which is arranged in the viewfinder beam path (S3), reflect the imaging beam path (S2) to the imaging optics in the viewfinder beam path (S3) with an image plane which can be viewed through an eyepiece (8), or into the beam path (S4) of the first light trap (13), and in that the micromirrors of the second DMD chip (7) deflect the imaging beam path (S2) to the video beam path (S5) by means of an optoelectronic transducer (92) for conversion of the video beam path (S5) to video signals (VS), or into the beam path (S6) of the second light trap (14).

14. The apparatus as claimed in claim 10, **characterized** in that a beam splitter (11) is arranged between a first DMD chip (6) and the viewfinder eyepiece (8), and splits the imaging beam path (S2) into a viewfinder beam path (S3) and a video beam path (S5), and

in that the micromirrors of the first DMD chip (6) reflect the imaging beam path (S2) alternately to the beam splitter (11) or into a beam path (S4) of a first light trap (13).

15. The apparatus as claimed in claim 14, **characterized** in that the micromirrors of a second DMD chip (7) deflect the video beam path (S5) to an optoelectronic transducer (92) for conversion of the video beam path (S5) to video signals (VS), or into a beam path (S6) of a second light trap (14).

16. The apparatus as claimed in at least one of the preceding claims 10 to 15, **characterized** in that the first and/or the second DMD chip (6, 7) is connected via a driver circuit (15) to a control circuit (16) for the movie camera (1).